

Status Of WSR-88D Program And Planned Changes Related To Level II Data

Presented by

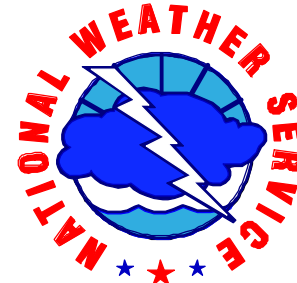
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NWS Focal Point For Operational WSR-88D Issues

18 June 2003

WSR-88D Level II Data Collection And Distribution Meeting

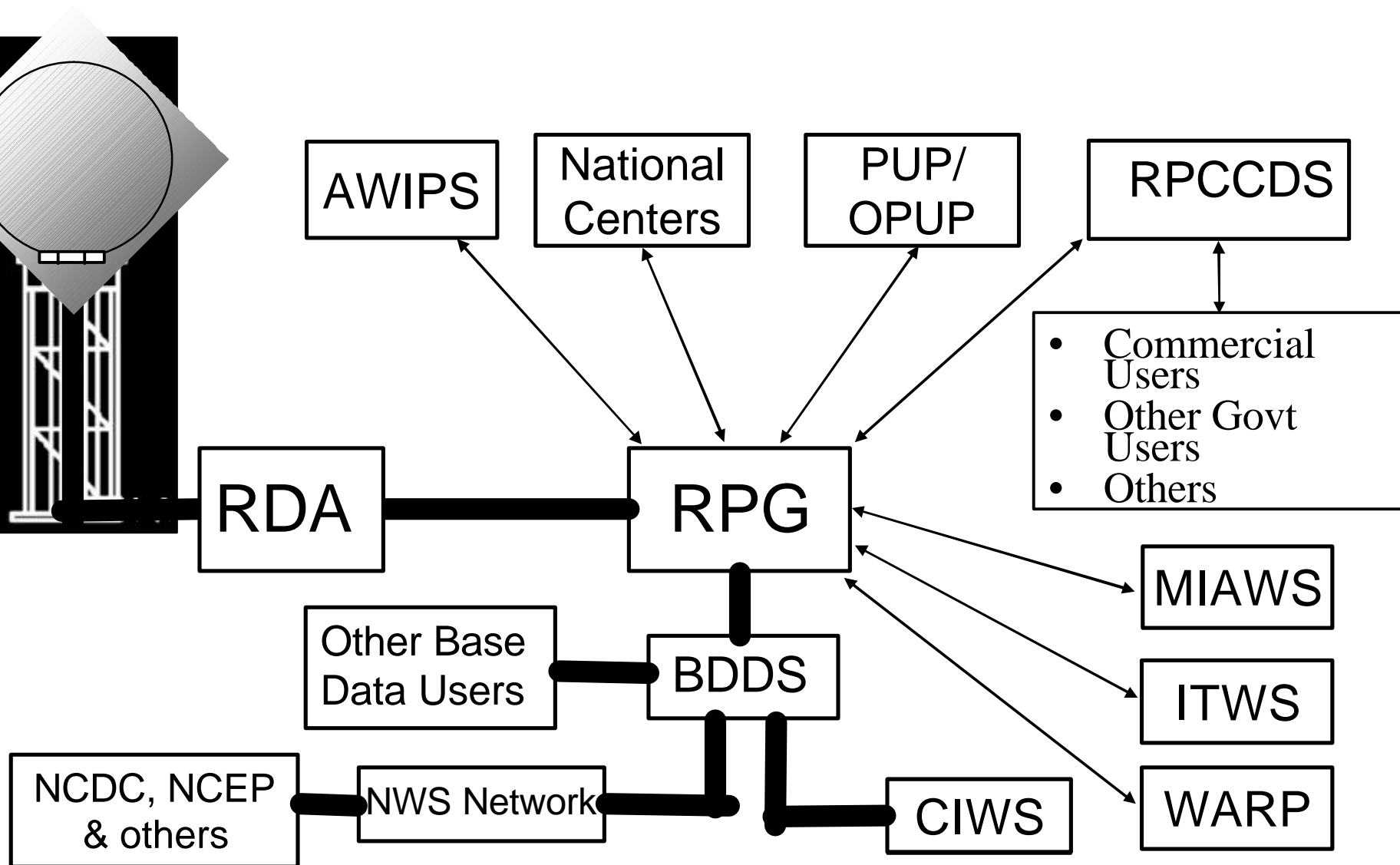
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Outline

- Flow Of Level II Data Through The WSR-88D
- Content Of The Electronically Transmitted Level II Data Stream
- NWS Planned WSR-88D Changes That May Impact The Data Content And Structure

WSR-88D Level II Data Flow



WSR-88D Level II Data Stream

- Level II Data = Base Data + Metadata
- The Highest Resolution Data The Radar Produces (Base Data)
 - All Antenna Sweeps
 - 250m Radial Velocity and Spectrum Width Resolution, Range 230 Km
 - 1 Km Reflectivity Resolution, Range 460 Km
- On Tape Copies Now And After RPG Build 5 Released, Level II Data Stream Also Contains Metadata (Examples)
 - RDA Status Data
 - RDA Performance/Maintenance Data
 - Clutter Filter Bypass Map
 - RDA Notch Width Map
 - RDA Adaptable Parameters

WSR-88D Level II Data Stream

(Continued)

- The Level II Data Stream Will Change Format
 - During Interim Operational Capability (IOC), Until WSR-88D Sites Load Build 5 (Spring/Summer 2004)
 - Data Compressed By BZIP2
 - Data Routed By Unidata Local Data Manager (LDM)
 - Data Formats Will Be Described By Documents At:
<http://www.roc.noaa.gov/>
 - NWS Will Not Provide Nor Support Decoder Or Application Software

WSR-88D Level II Data Stream

(Continued)

- During The Transition To Full Operational Capability (FOC) And When Sites Load Build 5 On Their RPG/BDDS (Spring 2004)
 - Data Compressed By BZIP2
 - Data Routed By Unidata Local Data Manager (LDM)
 - Metadata Will Be Added At Start Of Every Volume Scan
 - Data Formats Will Be Described By Documents At:
http://www.roc.noaa.gov/ssb/cm/icd_downloads.asp
- After The Open RDA Is Deployed
 - The Content Of The Metadata May Be Changed, Requires Change To RDA – RPG Interface
 - Date Of Change, Whether Change Will Be Made Is Unknown, But Likely No Earlier Than 2005

NWS Planned WSR-88D Changes That May Impact The Level II Data

- Beginning In April 2004, Sites Throughout Network Begin To Install Build 5 Software
 - Software Shipments From ROC Take About 6 Weeks, Sites Have 60 Days To Install
 - Information On Which Build Sites On Will Be On ROC Home Page (URL TBD)
 - Sites Should Issue A Free-Text Message In Advance (Day Of) Loading Software: <http://weather.noaa.gov/monitor/radar/>

Planned WSR-88D Changes That May Impact Level II Data

(Continued)

- Deployment Of Open RDA Enables Future Software Changes That **Could** Result In The Following Changes To Data
 - Changes **Could** Be Implemented For Operational Use At NEXRAD Sites, But Not Distributed On Level II Network If No NWS Requirements
 - Possible Changes And Level II Data Flow Increases (Estimated Multiplicative Factor)
 - 4.1 Minute Volume Coverage Pattern 1.24
 - 250 m, vice 1 km, Reflectivity Data 1.56
 - 0.5 °, vice 1.0° Azimuthal Sampling 2.00
 - Doppler Data To End Of 2nd Trip 1.49
 - 2 Clutter Filters & SNR Thresholds 1.97
 - Dual Polarization, 4 New Moments 2.32